

AMENDMENTS TO THE CLAIMS

1. (Currently amended) An electronic ballast for supplying electrical excitation to a filamentless discharge lamp, the electronic ballast comprising:
 - power conditioning circuitry for conditioning electrical power received from a source of electrical power, and producing a conditioned power signal; and
 - a lamp supply circuit for receiving the conditioned power signal and producing electrical signals to operate the filamentless discharge lamp, said lamp supply circuit including:
 - a programmable processor operable to vary an operating parameter of the lamp supply circuit to enable operation of a plurality of lamp types or sizes, said programmable processor being further operable to oscillate the lamp supply circuit at 60 KHz or greater to avoid acoustic distortion and strobbing of the discharge lamp;
 - an ignition circuit for producing an oscillating voltage signal for igniting the discharge lamp; and
 - a sustaining circuit for producing an oscillating current signal to sustain ignition of the discharge lamp.
2. (Original) The electronic ballast of claim 1, further comprising a programmable inductor circuit having a plurality of inductance values, wherein said programmable processor is operable to select one of said plurality of inductance values for operation of a particular lamp type or size.
3. (Original) The electronic ballast of claim 1 wherein said programmable processor is further operable to produce an oscillating processor signal for use in oscillating the supply circuit at a plurality of frequencies to operate discharge lamps of different types or sizes.
4. (Previously presented) The electronic ballast of claim 3 wherein said programmable processor oscillates the lamp supply circuit during ignition of the discharge lamp.

5. (Previously presented) The electronic ballast of claim 3 wherein said programmable processor oscillates the lamp supply circuit after ignition of the discharge lamp.
6. (Canceled)
7. (Previously presented) The electronic ballast of claim 1 wherein said sustaining circuit is inductorless.
8. (Previously presented) The electronic ballast of claim 1, further comprising:
 - a switch having a conductive state and a nonconductive state; and
 - a driver for switching the switch between its conductive and nonconductive states based on an oscillating processor signal, thereby producing the oscillating current signal.
9. (Currently amended) The electronic ballast of claim 6 1, further comprising:
 - a converter for converting an oscillating processor signal to analog format, and producing an analog oscillating signal; and
 - an amplifier for amplifying the analog oscillating signal, and producing said oscillating current signal.
10. (Original) The electronic ballast of claim 1 wherein said power conditioning circuitry includes:
 - a filter circuit for removing noise from electrical power provided by the electrical power source, producing a filtered power signal;
 - a power factor correction circuit for adjusting the power factor of the filtered power signal to produce a corrected power signal; and
 - a power supply circuit for converting electrical power received from the filtered power signal to a power level sufficient to operate the electronic ballast.
11. (Original) The electronic ballast of claim 1, further comprising a communication port for communicating with the programmable processor from a peripheral device.

12. (Original) The electronic ballast of claim 11 wherein said peripheral device is a computer.
13. (Original) The electronic ballast of claim 11 wherein said peripheral device is a communication network.
14. (Previously presented) The electronic ballast of claim 1, further comprising a voltage monitor for monitoring the electrical signals provided to the discharge lamp, and producing a voltage monitor signal corresponding to the electrical signals sensed by the voltage monitor.
15. (Previously presented) The electronic ballast of claim 14 wherein said programmable processor is further operable to control an oscillating processor signal based on the voltage monitor signal.
16. (Previously presented) The electronic ballast of claim 1, further comprising a current monitor for monitoring the electrical signals provided to the discharge lamp, and producing a current monitor signal corresponding to the electrical signals sensed by the current monitor.
17. (Previously presented) The electronic ballast of claim 16 wherein said programmable processor is further operable to control an oscillating processor signal based on the current monitor signal.
18. (Currently amended) An electronic ballast for supplying electrical excitation to a filamentless discharge lamp, the electronic ballast comprising:
 - power conditioning circuitry for conditioning electrical power received from a source of electrical power, and producing a conditioned power signal; and
 - a lamp supply circuit for receiving the conditioned power signal and producing electrical signals to ignite and sustain ignition of the filamentless discharge lamp, said lamp supply circuit including:
 - a programmable processor ~~operable~~ programmed to produce an oscillating processor signal for use in oscillating the supply circuit at a plurality of frequencies of 60Khz

or greater to enable the lamp supply circuit to operate discharge lamps of different types or sizes without acoustic distortion and strobbing;

an ignition circuit for receiving an oscillating processor signal and producing an oscillating voltage signal for igniting the discharge lamp; and

a sustaining circuit for receiving an oscillating processor signal and producing an oscillating current signal to sustain ignition of the discharge lamp.

19. (Original) The electronic ballast of claim 18 wherein said power conditioning circuitry includes:

a filter circuit for removing noise from electrical power provided by the electrical power source, producing a filtered power signal;

a power factor correction circuit for adjusting the power factor of the filtered power signal to produce a corrected power signal; and

a power supply circuit for converting electrical power received from the filtered power signal to a power level sufficient to operate the electronic ballast.

20. (Original) The electronic ballast of claim 19, further comprising a communication port for communicating with the programmable processor from a peripheral device.

21. (Original) The electronic ballast of claim 20 wherein said peripheral device is a computer.

22. (Original) The electronic ballast of claim 20 wherein said peripheral device is a digital communication network.

23. (Previously presented) The electronic ballast of claim 18, further comprising a voltage monitor for monitoring the electrical signals provided to the discharge lamp, and producing a voltage monitor signal corresponding to the electrical signals sensed by the voltage monitor.

24. (Original) The electronic ballast of claim 23 wherein said programmable processor is further operable to control the oscillating processor signal based on the voltage monitor signal.

25. (Previously presented) The electronic ballast of claim 18, further comprising a current monitor for monitoring the electrical signals provided to the discharge lamp, and producing a current monitor signal corresponding to the electrical signals sensed by the current monitor.
26. (Original) The electronic ballast of claim 25 wherein said programmable processor is further operable to control the oscillating processor signal based on the current monitor signal.
27. (Original) The electronic ballast of claim 18 wherein said sustaining circuit is inductorless.
28. (Currently amended) An electronic ballast for supplying electrical excitation to a filamentless discharge lamp, the electronic ballast comprising:
power conditioning circuitry for conditioning electrical power received from a source of electrical power, and producing a conditioned power signal; and
a lamp supply circuit for receiving the conditioned power signal and producing electrical signals to ignite and sustain ignition of a filamentless discharge lamp, said lamp supply circuit including:
a programmable processor ~~operable~~ programmed to produce an oscillating processor signal for use in oscillating the supply circuit at a plurality of frequencies of 60 KHz or greater to enable the lamp supply circuit to operate discharge lamps of different types or sizes without acoustic distortion and strobbing; and
an inductorless sustaining circuit for receiving the oscillating processor signal and producing an oscillating current signal for operating the discharge lamp after ignition.
29. (Currently amended) An electronic ballast for supplying electrical excitation to a filamentless discharge lamp, the electronic ballast comprising:
power conditioning circuitry for conditioning electrical power received from a source of electrical power, and producing a conditioned power signal; and
a lamp supply circuit for receiving the conditioned power signal and producing electrical signals to operate the filamentless discharge lamp, said lamp supply circuit including a programmable processor ~~operable to vary an operating parameter of the lamp~~

~~supply circuit to enable operation of a plurality of lamp types or sizes, said programmable processor being further operable~~ programmed to produce an oscillating processor signal for use in oscillating the supply circuit at a plurality of frequencies of 60 KHz or greater to enable the lamp supply circuit to operate discharge lamps of different types or sizes without acoustic distortion and strobbing.

30. (Currently amended) An electronic ballast for supplying electrical excitation to a filamentless discharge lamp, the electronic ballast comprising:

power conditioning circuitry for conditioning electrical power received from a source of electrical power, and producing a conditioned power signal, said power conditioning circuitry including:

a filter circuit for removing noise from electrical power provided by the electrical power source, producing a filtered power signal;

a power factor correction circuit for adjusting the power factor of the filtered power signal to produce a corrected power signal; and

a power supply circuit for converting electrical power received from the filtered power signal to a power level sufficient to operate the electronic ballast; and

a lamp supply circuit for receiving the conditioned power signal and producing electrical signals to operate the filamentless discharge lamp, said lamp supply circuit including a programmable processor operable to vary an operating parameter of the lamp supply circuit to enable operation of a plurality of lamp types or sizes, said programmable processor being further operable to oscillate the lamp supply circuit at 60 KHz or greater to avoid acoustic distortion and strobbing of the discharge lamp.

31. (Currently amended) An electronic ballast for supplying electrical excitation to a filamentless discharge lamp, the electronic ballast comprising:

power conditioning circuitry for conditioning electrical power received from a source of electrical power, and producing a conditioned power signal;

a lamp supply circuit for receiving the conditioned power signal and producing electrical signals to operate the filamentless discharge lamp, said lamp supply circuit including a programmable processor operable to vary an operating parameter of the lamp supply circuit to enable operation of a plurality of lamp types or sizes, said programmable processor being further operable to oscillate the lamp supply circuit at 60 KHz or greater to avoid acoustic distortion and strobbing of the discharge lamp; and

a communication port for communicating with the programmable processor from a peripheral device.

32. (Currently amended) An electronic ballast for supplying electrical excitation to a filamentless discharge lamp, the electronic ballast comprising:

power conditioning circuitry for conditioning electrical power received from a source of electrical power, and producing a conditioned power signal; and

a lamp supply circuit for receiving the conditioned power signal and producing electrical signals to operate the filamentless discharge lamp, said lamp supply circuit including a programmable processor operable to vary an operating parameter of the lamp supply circuit to enable operation of a plurality of lamp types or sizes, said programmable processor being further operable to oscillate the lamp supply circuit at 60 KHz or greater to avoid acoustic distortion and strobbing of the discharge lamp; and

a voltage monitor for monitoring the electrical signals provided to the discharge lamp, and producing a voltage monitor signal corresponding to the electrical signals sensed by the voltage monitor.

33. (Currently amended) An electronic ballast for supplying electrical excitation to a filamentless discharge lamp, the electronic ballast comprising:

power conditioning circuitry for conditioning electrical power received from a source of electrical power, and producing a conditioned power signal; and

a lamp supply circuit for receiving the conditioned power signal and producing electrical signals to operate the filamentless discharge lamp, said lamp supply circuit

including a programmable processor operable to vary an operating parameter of the lamp supply circuit to enable operation of a plurality of lamp types or sizes, said programmable processor being further operable to oscillate the lamp supply circuit at 60 KHz or greater to avoid acoustic distortion and strobbing of the discharge lamp; and

a current monitor for monitoring the electrical signals provided to the discharge lamp, and producing a current monitor signal corresponding to the electrical signals sensed by the current monitor.